

Notice of Allowability

Application No.

10/031,366

Examiner

Alan Diamond

Applicant(s)

LOCK ET AL.

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed October 31, 2005.
2. ☒ The allowed claim(s) is/are 6, 13 and 14.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of. Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance: The dielectrophoretic (DEP) cell in claim 6, wherein the electrodes are in register and are single half sinusoids connected between straight arms, is exemplified in instant Figure 3d. The DEP cell in claim 13, wherein the electrodes are in register and positions of maximum curvature of the recited sinusoids are arranged along divergent curves, is exemplified in instant Figure 5. The DEP cell in claim 14, wherein the electrodes in the array are in register and comprise a first central array of sinusoidal or half sinusoidal electrodes, the axes of the electrodes of the first central array being straight and parallel, and a second outer array of sinusoidal or half sinusoidal electrodes, the axes of the electrodes of the second outer array being in the form of nested "U" shapes, there being provided means to apply electrical signals of different phases independently to the first and second arrays, is exemplified in instant Figure 6. The DEP cells in claims 6, 13, and 14 are not taught or suggested by the prior art. Talary et al, "Electromanipulation and separation of cells using traveling electric fields," J. Phys D Appl. Phys., Vol. 29, pages 2198-2203 (1996) shows electrodes in register in Figure 1 at page 2199. However, Talary et al's electrodes are not half sinusoids as in claim 6, do not have the maximum curvature as in claim 13, nor do they lead a skilled artisan to the instant first and second array of electrodes in claim 14. Likewise, none of WO 98/04355, WO 99/17883, U.S. 5,795,457, or WO 97/34689 leads a skilled artisan to the claimed DEP cells. For example, like Talary et al, the electrodes in Figure 5(A-C) and Figure 6 of U.S. Patent 5,795,457 are not half sinusoids as in claim 6, do not have the

maximum curvature as in claim 13, nor do they lead a skilled artisan to the instant first and second array of electrodes in claim 14. If anything, the electrodes in said Figure 5(A-C) and Figure 6 of U.S. Patent 5,795,457 are similar to Prior Art Figure 1 in the instant application.

The DEP cell of Washizu et al (U. S. Patent 6,875,329) has electrodes as seen in Figures 3 and 16. These electrodes are not half sinusoids as in claim 6, do not have the maximum curvature as in claim 13, nor do they lead a skilled artisan to the instant first and second array of electrodes in claim 14. In any event, Washizu et al cannot be used as prior art due to its later filing date.

US 6,264,815, US 6,296,752, US 2002/0036141, and US 6,936,151 are hereby made of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Diamond whose telephone number is 571-272-1338. The examiner can normally be reached on Monday through Friday, 5:30 a.m. to 2:00 p.m. ET.

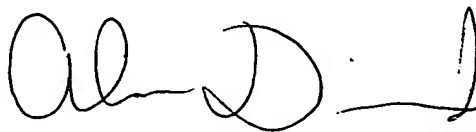
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alan Diamond
Primary Examiner
Art Unit 1753

Alan Diamond
November 8, 2005

A handwritten signature in black ink, appearing to read 'Alan Diamond', with a stylized flourish at the end.